Online System and Method for Entrusting a Semiconductor Package Order ~~ONLINE ENTRUSTING SYSTEM~~

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

The present invention relates to an online entrusting system, and more specifically, relates to an online ~~entrusting~~ system and method for entrusting a semiconductor package order for processing the required information relating to semiconductor package.

2. DESCRIPTION OF THE PRIOR ART

Modern network systems allows customers and companies to electronically communicate with each other to share and transfer information by computers. The electronic commerce, i.e. the E-commerce, becomes the trend for transaction. Conventional commerce allows a salesman to use a telephone or a facsimile machine to negotiate a business with a customer. The conventional commercial method is so slow and so expensive. The rapidly developed internet has enabled computers to provide an efficient, widely accessible, and secure mechanism for transacting the business by the E-commerce.

A feature of the E-commerce for transacting the business is the capability of integrating the information

from different electrical systems to perfectly process the requisitions of users at real time. The transaction performed by the high level processor reduces the cost of the manpower. The intention of customers and users to transact the business by the E-commerce is increased owing to its low cost.

However, the security issues are the most important questions for transacting the business by the E-commerce. Users may worry the leakage of personal information such as credit card number, account number. The business transacted by the business (B2B) type E-commerce may contain the confidential information of a company. If the trade secret is leaked or fetched by others, the company will lose technology or privilege information. At present, most of the information is encrypted before transmission. For example, SSL 128 bits is a typically technology to protect the information from being fetched or leaked.

Further, the limitation of the time and the space for transacting the business by the E-commerce is less and less. However, for example, a conventional entrust system for transacting the business has to analyze the orders or the requisitions from customers before performing any action about the orders or the requisitions by a computer or the manpower. Then, the customers have to wait for receiving the result about the orders or the requisitions several days later. The time and the process for processing the orders and the requisitions are so long and so complex. It is necessary to develop a novel automatic entrusting system to overcome the disadvantages in the prior art.

SUMMARY OF THE INVENTION

In terms of the previous discussion, the object of the present invention is to provide an online system for automatically generating ~~producing~~ an analysis result according to ~~a~~ required information, i.e. ~~a~~ semiconductor package information~~,~~ on an semiconductor package order inputted by a user. The online entrusting system also sending ~~responds~~ the analysis result to the user.

The present invention provides an online entrusting system for entrusting a semiconductor package order. The online entrusting system comprises a management ~~manage~~ and control unit for processing ~~to process a~~ an semiconductor package order inputted by a user, wherein the semiconductor package order comprises ~~a~~ required information. A database is electrically coupled to the management ~~manage~~ and control unit for storing ~~to store~~ the required information and ~~a~~ schedule information. At least one analysis module ~~A plurality of analysis modules~~ electrically coupled to the management ~~manage~~ and control unit generates ~~produces~~ an analysis result of ~~about~~ the required information inputted by the user. A reply means sends ~~responds~~ the analysis result generated ~~produced~~ by the analysis module~~s~~ to the user. Furthermore, the user communicates with the online entrusting system via internet. The required information is selected from the group consisting of ~~at least one information of a~~ substrate information, ~~a~~ die dimension information, ~~a~~ package type

information, ~~a~~ thermal performance information, ~~an amount of~~ substrate ~~layers~~ layer information, ~~numbers of~~ input ~~terminals~~ terminal information, ~~and~~ output terminal information ~~terminals~~, and terminal pitch information of a ~~pitches between said input and output terminals about said~~ semiconductor package.

The present invention also discloses an ~~a~~ online method for ~~automatically providing online package~~ entrusting a semiconductor package order comprises:

inputting ~~an~~ required information about a semiconductor package by a user;

storing the required information in a database;

generating at least one analysis result by at least one analysis module ~~producing a plurality of analysis results by a plurality of analysis modules~~ according to the required information of the semiconductor package order;

storing ~~recording~~ the analysis result~~s~~ in the database; and

sending ~~responding~~ the analysis result~~s~~ to the user by a reply means.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a functional diagram of the system according to the present invention ; and

FIG. 2 is a flow chart diagram according to the present invention.

DESCRIPTION OF THE PREFERRED

EMBODIMENT

The present invention discloses an online ~~entrusting~~ system for entrusting a semiconductor package order to automatically generate ~~provide~~ an analysis result of ~~about a~~ required information inputted by the user. The online entrusting system automatically analyzes the required information and send ~~responds~~ the analysis result to the user by integrating each element of the online entrusting system and each analysis step. While the online entrusting system is electrically coupled to a high-efficiency server, the online entrusting system operates more effectively to process and send ~~respond~~ the required information to the user.

As shown in FIG. 1, the client end 100 may fill the blank on an Internet interface 101 of the present system by a user. The items on the Internet interface include but not limited to the required information including ~~, i.e. a~~ semiconductor package information, ~~a~~ personal information, ~~a material and~~ an analysis service providing services including a thermal performance analysis, a circuits analysis, a stress analysis, a reliability analysis, a material analysis and a substrate analysis. The required information is selected from the group consisting of ~~at least one information of a~~ substrate information, ~~a~~ die dimension information, ~~a~~ package type information, ~~a~~ thermal performance information, ~~an amount of~~ substrate ~~layers~~ layer information, ~~numbers of~~ input ~~terminals~~ terminal information, ~~and~~ output terminal information ~~terminals~~,

and terminal pitch information of a ~~pitches between said input and output terminals about said~~ semiconductor package.

The user or users may select one or more services via the communication interface, i.e. the Internet interface 101. The information will be sent ~~transmitted~~ to the database, i.e. an entrusting database 103, of the entrusting system and the entrusting database 103 records the semiconductor package order from a client end 100. The entrusting database 103 transmits the semiconductor package order to an entrusting system server 112 that includes a management ~~manage~~ and control unit 104 and a reply means 105. The management ~~manage~~ and control unit 104 performs the request according to the semiconductor package order and sends related information to ~~corresponding~~ at least one analysis module. ~~analysis modules.~~ The analysis module is ~~modules are~~ selected from the group consisting ~~at least one~~ of a thermal analysis module 106, a circuit analysis module 107, a stress analysis module 108, a reliability analysis module 109, a material analysis module 110 and a substrate analysis module 111. Each analysis module may include a sub-database for recording the analysis records. The analysis result is then forwarded to the management ~~manage~~ and control unit 104. Subsequently, the management ~~manage~~ and control unit 104 sends the information to the entrusting database 103 and the reply means 105. The entrusting database 103 records the semiconductor package order and the analysis result~~s~~ to prepare for sending ~~responding~~ the result~~s~~ to the user at

any time via different methods, such as the network, sending an e-mail, or a facsimile. The reply means 105 may transform the analysis result~~s~~ to an electronic mail format and forward to the user, or the client, via the network. The reply means will send the report of ~~about~~ the required information and ~~a~~ schedule information to the client end 100 by an e-mail, a facsimile, a short message or the like. The e-mail system is just an example~~, not used to limit the scope of the present invention~~. The schedule information includes the progress information of ~~about~~ processing the semiconductor package order and the result of ~~for~~ processing the semiconductor package order.

FIG. 2 is a flow chart in accordance with the present invention. The user may login the system and then input the data, i.e. ~~a~~ required information, via a network 102, as shown in step 201. As shown in step 202, the entrusting database 103 records the required information and sends the required information to the management ~~manage~~ and control unit 104. Then the management ~~manage~~ and control unit 104 determines what service the user request~~ed~~, as shown in step 203. The management ~~manage~~ and control unit 104 controls at least one analysis module ~~a plurality of analysis modules to analyze~~ for analyzing the required information provided by the user. If the required information is insufficient to determine what kind of analysis the user wants, the reply means 105 will ask the user to provide more required information again, as shown in step 201. Steps 214, 224, 234, 244, 254 and 264 are to perform the thermal performance analysis, the circuit analysis, the stress analysis, the reliability analysis, the

material analysis and the substrate analysis respectively.

The analysis result will be sent ~~responded~~ to the management ~~manage~~ and control unit 104, and then the management ~~manage~~ and control unit 104 collects the result~~s~~ as shown in step 205. The management ~~manage~~ and control unit 104 stores the required information and the analysis result~~s~~ in the entrusting database 103 capable of being inquired by the user, i.e. the client, as shown in step 206. Subsequently, the stored information will be sent ~~responded to~~ by the reply means 105 to inform ~~notify~~ the user. The result~~s are responded~~ is sent to the client end 100 in step 207 by the system via an e-mail, a facsimile or the like.

As is understood by a person skilled in the art, the foregoing preferred embodiments of the present invention are illustrated of the present invention rather than limiting of the present invention. It is intended to cover various modifications and similar arrangements included within the spirit and scope of the appended claims, the scope of which should be accorded the broadest interpretation so as to encompass all such modifications and similar structure. Thus, while the preferred embodiment of the invention has been illustrated and described, it will be appreciated that various changes can be made therein without departing from the spirit and scope of the invention.